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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/961,297	09/25/2001	Nicola Benvenuti	91436-345	6788
22463	7590	08/30/2005	EXAMINER PHAN, MAN U	
SMART AND BIGGAR 438 UNIVERSITY AVENUE SUITE 1500 BOX 111 TORONTO, ON M5G2K8 CANADA			ART UNIT 2665	PAPER NUMBER

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/961,297

Applicant(s)

BENVENUTI ET AL.

Examiner

Man Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-22, 24-26 and 28-31 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 23 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/25/01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***DETAILED ACTION***

1. The application of Benvenuti et al. for an "Transparent error count transfer method and apparatus" filed 09/25/2001 has been examined. The preliminary amendment filed 9/25/01 have been entered and made of record. This application claims Priority from Provisional Application 60307372 filed 7/25/2001. Claims 1-31 are pending in the application.

***Claim Rejections - 35 USC ' 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2, 5, 8-17, 19-22, 24-26, 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arao (US#6,667,990) in view of Pick et al. (US#6,826,200).

With respect to claims 8, 11, 14, 20, 24, 28 and 30, Arao (US#6,667,990) and Pick et al. (US#6,826,200) disclose a novel system and method for transparent multiplexer/demultiplexer (TMUX) for use with a high speed connection between two points utilizing error counts for each tributary signal being transmitted through the TMUX, according to the essential features of the claims. Arao (US#6,667,990) discloses in Fig. 1 a schematic diagram illustrated an exemplary transmission terminal station apparatus in which a low-order group terminal device is connected through a low-speed line, and a high-order group terminal station device is connected through a high-speed line. The transmission terminal station apparatus includes: (1) a first extraction unit which, when a multi-frame obtained by multiplexing a plurality of frames each having a payload in which data to be transmitted is stored and an overhead in which operation maintenance information of a network is stored is received from the high-order group terminal station device, extracts the operation maintenance information stored in the overhead of the multi-frame; (2) a second extraction unit for extracting detection information serving as information related to the operation maintenance information stored in the overhead of each frame when each frame included in the multi-frame is received by the high-order group terminal station device from each frame included in the multi-frame; (3) a separation unit for separating the multi-frame into a plurality of frames; and (4) a setting unit for inserting new

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operation maintenance information generated by using information related to the operation maintenance information extracted by the first extraction unit and the detection information extracted by the second extraction unit into the overhead of each frame separated by the separation unit to transmit the operation maintenance information to the low-order group terminal device (Col. 4, lines 30 plus).

However, Arao does not disclose expressly wherein the error count bit is inserted in at least one unused portion of the TOH according to a standard that defines the high speed frame. In the same field of endeavor, Pick et al. (US#6,826,200) teaches a method and system for transporting of the encoded error rate utilizing the unused byte in the overhead (TOH) generated for the transparent multiplexer/demultiplexer (TMUX). Pick et al. discloses a method of preserving error counts for a plurality of tributary signals into a transparent multiplexer/demultiplexer (TMUX). The tributary signals being transparently transported over a high data rate span, the method comprising: at a first end of the span: a1) detecting a raw error count for each incoming tributary signal; b1) encoding the raw error count into an encoded error count; c1) inserting the encoded error count in specific unused bytes of successive TMUX messages for transport to a second end of the span; at the second end: a2) extracting the encoded error count from specific unused bytes of successively received TMUX messages transported from the first end; b2) decoding the encoded error count into the raw error count; c2) adjusting portions of the tributary signal received from the first end such that the tributary signal has an error count substantially equal to the raw error count (Col. 22, lines 5 plus).

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Regarding claims 3, 4 and 18, Pick et al. further teach in Fig. 2 illustrated the structure of a typical standard SONET frame, in which the bytes B1 count (190) and B2 count (200) are available for encoded error counts (Col. 6, lines 28 plus).

Regarding claims 1, 2, 5, 10, 13, 16, 17, 19, 22, 26, they are method claims corresponding to the apparatus claims 8, 11, 14, 20, 24, 28 and 30 above. Therefore, claims 1, 2, 5, 10, 13, 16, 17, 19, 22, 26 are analyzed and rejected as previously discussed with respect to claims 8, 11, 14, 20, 24, 28 and 30.

Regarding claims 12, 15, 21, 25, 29, they are system claims corresponding to the method and apparatus claims above. Therefore, claims 12, 15, 21, 25, 29 are analyzed and rejected as previously discussed with respect to claims 1, 2, 5, 10, 13, 16, 17, 19, 22, 26 and 8, 11, 14, 20, 24, 28 and 30.

With respect to claim 31, this claim differ from claims Arao in view of Pickin that the claim recited a computer program product for performing the same basis of steps and apparatus of the prior arts as discussed in the rejection of claims 1, 2, 5, 8-17, 19-22, 24-26, 28-30. It would have been obvious to a person of ordinary skill in the art to implement a computer program product in Arao in view of Pick for performing the steps and apparatus as recited in the claims with the motivation being to provide an efficient enhancement to the transparent error count in TMUX system, and easy to maintenance, upgrade.

One skilled in the art would have recognized the need for the transparent error count in a TMUX system, and would have applied Pick's teaching of the inserting encoded error counts the unused bytes of successive TMUX messages for transport to a second end of the span into Arao's novel use of code error in TMUX system. Therefore, It would have been obvious to a

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person of ordinary skill in the art at the time of the invention was made to apply Pick et al.'s combiner/TMUX simulated B1 transparency in fiber optic network running SONET into Arao's transmission terminal station apparatus and network system with the motivation being to provide a method and system for transparent multiplexer/demultiplexer (TMUX) for use with a high speed connection between two points utilizing error counts for each tributary signal being transmitted through the TMUX.

***Allowable Subject Matter.***

5. Claims 6, 7, 23, 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest the steps of determining a synchronization status/channel identification bit pattern representative of the indication of synchronization status/channel identifier, and inserting the synchronization status/channel identification bit pattern into the transport overhead for the high-speed frame, where the synchronization status/channel identification bit pattern is inserted in at least one portion of the transport overhead and where the at least one portion is unused according to the standard that defines the high-speed frame. The closest prior art of record fails to disclose or suggest whether receiving an indication of a quantity of errors associated the high speed-frame, and wherein determining the error count quantity is further based on the indication of the quantity of errors associated with high-speed frame, as specifically recited in the claims.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Martin et al. (US#5,841,760) is cited to show the transparent multiplexer/demultiplexer.

The Pick et al. (US#6,859,453) is cited to show the clear channel access methods, apparatuses, media and signals.

The Roberts (US#6,915,348) is cited to show the validation of a connection between arbitrary end-points in a communications network using an augmented SPE.

The Mattson (US#6,885,632) is cited to show the method and system for signal degrade (SD) information passthrough in T-MUX systems.

The Burke et al. (US#6,310,911) is cited to show the method of detecting signal degradation fault conditions within SONET and SDH signals.

The Denton (US#5,923,653) is cited to show the SONET/SDH receiver processor.

The Turudic et al. (US#5,452,306) is cited to show the out-of-band embedded overhead architecture for a transmission network.

The Noser (US#5,315,594) is cited to show the inter-network transport element of SONET overhead.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The



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examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

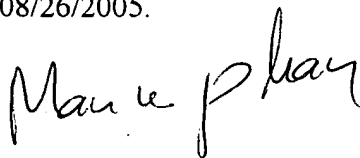
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

08/26/2005.



**MAN U. PHAN  
PRIMARY EXAMINER**